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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,011	10/24/2003	Alex C. Toy	1023-286US01	9361

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EXAMINER	
HOLMES, REX R	

ART UNIT	PAPER NUMBER
3762	

NOTIFICATION DATE	DELIVERY MODE
06/02/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/693,011	TOY ET AL.	
	Examiner	Art Unit	
	REX HOLMES	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,21 and 23-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,21 and 23-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/9/09; 5/12/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The amendment filed 2/17/09 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

2. In line 3 of paragraph 141, "… the gaps may extend outward **to more than two different** edges …" (emphasis added). The specification might have support for 2-3 edges but not 4, 5, or more. Therefore there is no support for more than two different edges.

3. In lines 5-6 of paragraph 141, "… to form **a plurality** of interruptions …" (emphasis added). The images might have support for 2-3 gaps but not 4, 5 or more. Therefore there is not support for plurality.

4. In line 8 of paragraph 141, "… in **substantial** overlapping …" (emphasis added). There might be support for overlapping alignment but the specification as submitted fails to have support for substantial overlapping and the present range of substantial is unknown in light of the original disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 37-39 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims are based on the newly amended paragraph 141 that was objected for new matter.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-4, 21 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pesola et al. (U.S. Pat. 5,271,056 hereinafter “Pesola“) in view of Maoz et al. (U.S. Pub. 2004/0125029 hereinafter “Maoz”)

10. In regards to claims 1-4, Pesola discloses a mobile wireless device with a housing (10,11), an internal antenna (8,9) on a first circuit board with a ground foil layer (3) and a display screen (5) on a second circuit board with a ground foil layer (2) but does not disclose that there is a substantially contiguous ground plane layer interrupted by a plurality of outwardly extending gaps to disrupt the flow of eddy currents, nor that the ground plane regions defined by these gaps are interconnected. However, Maoz discloses an internal antenna (10), a ground plane layer (e.g. ¶ 10), a plurality of gaps (53a, 53b) and a display on a separate board (4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the wireless device as taught by Pesola, with a programmer with an internal antenna and gaps on the circuit board that is separate from the display circuit as taught by Maoz, since such a modification would provide the predictable result of a programmer with an internal antenna and a ground plane layer that is disrupted by gaps for providing increased power without internal noise.

11. It is noted that a mobile phone is capable of being used to program an implantable device. This is evidenced by the art of record (specifically Schommer, Mark E. et al. - US 20050075692 A1; Phillips, William C. et al. - US 20050075691 A1; Toy, Alex C. et al.- US 20050075688 A1; Goedeke, Steven D. - US 20040152953 A1; Malek, Shahram et al. - US 20030171789 A1; Haller, Markus et al. - US 20020052539 A1; Causey, James D. III et al. - US 20020002326 A1; Carter; Scott J. et al. - US 6526310 B1).

12. It is noted that the specification of Maoz does not explicitly say that the circuit board (4) explicitly contains a display, but figure 1 clearly shows a display on circuit board (4) that is separate from the internal antenna (10).

13. Regarding claim 21, Pesola in view of Maoz disclose the claimed invention except for gap width. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the gap as taught by Pesola in view of Maoz, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

14. Regarding claim 35, Pesola in view of Maoz disclose the claimed invention except for stating whether the electronics on each of the circuit boards are analog or digital. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system as taught by Pesola in view of Maoz, with either analog or digital electronics since it was known in the art that system components can be made from either analog or digital circuitry. Further, It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the system as taught by Pesola in view of Maoz, with either analog or digital circuitry, because Applicant has not disclosed that analog or digital circuitry provides an advantage, is used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the circuitry as taught by Pesola in view of Maoz, because it provides

the predictable results of a display and antenna and since it appears to be an arbitrary design consideration which fails to patentably distinguish over Pesola in view of Maoz.

15. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pesola in view of Maoz as applied to claim 1 above, and further in view of Stein et al. (U.S. Pub. 2004/0230246 hereinafter "Stein").

16. Regarding claims 9 and 10, Pesola in view of Maoz discloses the claimed invention except for the battery bay being formed within a loop-like antenna. Stein teaches that it is known to use the antenna loop as the basis for the battery bay as set forth in figure 9 elements 66 and 76 to provide noise immunity from external intereference. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the circuit board as taught by Pesola in view of Maoz, with the antenna loop battery bay as taught by Stein, since such a modification would provide the predictable results of a circuit board with a specific location and design for the antenna for providing noise immunity.

17. Claims 5-8, 23-29, 32-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pesola in view of Maoz as applied to claim 1 above, and further in view of Persson (U.S. Pat. 6,207,912).

18. In regards to claims 5-6 and 23-27, Pesola in view of Maoz discloses a programmer for an implanted medical device with an internal telemetry antenna on an antenna circuit board with a ground foil layer, display screen on another circuit board with a ground foil layer, and a substantially contiguous ground plane layer interrupted by a plurality of outwardly extending gaps, but Pesola in view of Maoz fails to disclose that

the first circuit board contains a first or second electrostatic layer. However Persson discloses printed circuit boards for portable communication devices that utilize electrostatic discharge layers that define a peripheral conductive layer and a central aperture (e.g. Fig. 3; Cols. 3-4). Pesola in view of Maoz and Persson teach of portable communication devices that include printed circuit boards and antennas and thus teach analogous arts. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the circuit board of Pesola in view of Maoz, with a printed circuit board with a static discharge layer as taught by Persson since it would provided the predictable results of a device with a protection circuit to prevent circuit failure due to electrostatic discharge. Since the layers are throughout the entire circuit board then it would be obvious that the electrostatic discharge layer would be the approximate size and shape of the antenna.

In regards to claims 7-8, 28 and 29, Pesola in view of Maoz and further in view of Persson teach that the circuit board that makes up the device has electrostatic discharge layers. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the circuit board as taught by Pesola in view of Maoz and further in view of Persson with the dual layers of electrostatic discharge, because Applicant has not disclosed that dual layers provides an advantage, is used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a single layer as taught by Pesola in view of Maoz and further in view of Persson, because it provides the predictable results of protection against electrostatic discharge

and since it appears to be an arbitrary design consideration which fails to patentably distinguish over Pesola in view of Maoz and further in view of Persson.

Therefore, it would have been an obvious matter of design choice to modify circuit board to obtain the invention as specified in the claim(s).

19. In regards to claims 32-34, Pesola in view of Maoz and further in view of Persson disclose the claimed invention except for gap width. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the gap as taught by Pesola in view of Maoz and further in view of Persson, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

20. Regarding claim 36, Pesola in view of Maoz and further in view of Persson disclose the claimed invention except for stating whether the electronics on each of the circuit boards are analog or digital. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system as taught by Pesola in view of Maoz and further in view of Persson, with either analog or digital electronics since it was known in the art that system components can be made from either analog or digital circuitry. Further, It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the system as taught by Pesola in view of Maoz and further in view of Persson with either analog or digital circuitry, because Applicant has not disclosed that analog or digital circuitry provides an advantage, is used for a particular purpose, or solve a stated problem. One of ordinary

skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the circuitry as taught by Pesola in view of Maoz and further in view of Persson, because it provides the predictable results of a display and antenna and since it appears to be an arbitrary design consideration which fails to patentably distinguish over Pesola in view of Maoz and further in view of Persson.

Therefore, it would have been an obvious matter of design choice to modify Pesola in view of Maoz in view of Persson to obtain the invention as specified in the claim(s).

21. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pesola in view of Maoz in view of Persson as applied to claim 23 above, and further in view of Stein et al. (U.S. Pub. 2004/0230246 hereinafter "Stein").

22. In regards to claims 30 and 31, Pesola in view of Maoz in view of Persson disclose the claimed invention except for the battery bay being formed within a loop-like antenna. Stein teaches that it is known to use the antenna loop as the basis for the battery bay as set forth in figure 9 elements 66 and 76 to provide noise immunity from external intereference. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the circuit board as taught by Stein in view of Maoz in view of Persson, with the antenna loop battery bay as taught by Stein, since such a modification would provide the predictable results of a circuit board with a specified location and design for the antenna, for providing noise immunity.

Response to Arguments

23. Applicant's arguments filed 2/17/09 have been fully considered but they are not persuasive.

24. Regarding claim 1, The Applicant argues that the combination of Pesola in view of Maoz would change the principle of operation of Pesola and thus, the combination of Pesola in view of Maoz is insufficient to render the Applicant's claim 1 obvious. The examiner respectfully disagrees. The applicant is arguing that the intended use of Pesola is changed by the modifications of Maoz. It is noted that the applicant is claiming an apparatus and Pesola in view of Maoz discloses each and every limitation of the claims. The intended use of a reference has no bearing on an apparatus claim. Maoz teaches a mobile wireless device with everything limitation of the claim, but fails to teach a ground plane layer with gaps. However, Maoz discloses an similar mobile wireless device with internal antenna (10), a ground plane layer (e.g. ¶ 10), a plurality of gaps (53a, 53b) and a display on a separate board (4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the wireless device as taught by Pesola, with programmer with an internal antenna and gaps on the circuit board that is separate from the display circuit as taught by Maoz, since such a modification would provide the predictable result of a programmer with an internal antenna and a ground plane layer that is disrupted by gaps for providing increased power without internal noise. Therefore the rejection stands.

25. Regarding claim 23. The Applicant argues that the combination of Pesola in view of Maoz would change the principle of operation of Pesola and thus, the combination of

Pesola in view of Maoz is insufficient to render the Applicant's claim 1 obvious. The Applicant further argues that the addition of Persson fails to teach a electrostatic discharge ("ESD") layer defining a second apperature in substantially overlapping alignment with the first aperature. The Applicant further argues that the domefoil 50 does not teach an apperature substantially overlapping alignment with the first aperature. The examiner respectfully disagrees. As the Applicant pointed out the domefoil 50 is between the keypad and the circuit board (Col. 3, ll. 20-53). Thus, the domefoil is in substantailly overlapping alignment with the circuit board. Persson discloses printed circuit boards for portable communication devices that utilize electrostatic discharge layers that define a peripheral conductive layer and a central aperture (e.g. Fig. 3; Cols. 3-4). It is noted that the claim does not state that the ESD layer has to be on the printed circuit board, but that it just has to be in a substantially overlapping alignment. Therefore the rejection stands.

26. Regarding claim 3, The Applicant argues that Pesola in view of Maoz fail to teach a ground plane layer interrupted by gaps that disrupt the flow of eddy currents. As disclosed above, Peola in view of Maoz teach a ground plane layer interrupted by gaps. Since the gaps interrupt the ground plane they inherently disrupt eddy currents.

27. Regarding claims 5-8, the Applicant argues that none of the references teach and ESD layer defining an aperture that approximates the size and shape of an antenna. The Examiner respectfully disagrees. As stated above, It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the circuit board of Pesola in view of Maoz, with a printed circuit board

with a static discharge layer as taught by Persson since it would provided the predictable results of a device with a protection circuit to prevent circuit failure due to electrostatic discharge. Since the layers are throughout the entire circuit board then it would be obvious that the electrostatic discharge layer would be the approximate size and shape of the antenna.

28. It is further noted that "approximately" is a relative term of degree and since the antenna size has not been defined and the prior show an antenna of a first circuit board, and the prior further teaches an ESD layer on each board. Therefore, the ESD layer is approximately the size and shape of the antenna.

29. Next the Applicant argues that the references have been considered individually and in combination with the other references relied on in the office action and still fail to teach or suggest the subject matter recited and thereby fail to render obvious any of the claims. The examiner respectfully disagrees and directs the Applicant's attention to the remarks above for claims 1 and 23.

Conclusion

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ito et al. (7,009,410) – PCB with dual electrostatic discharge layers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REX HOLMES whose telephone number is (571)272-8827. The examiner can normally be reached on M-F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. H./
Examiner, Art Unit 3762

/George R Evanisko/
Primary Examiner, Art Unit 3762